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ADVANCED STATISTICAL ANALYSIS: USE DATA TO ACHIEVE YOUR GOALS

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Omer Minkara
Vice President & Principal Analyst, Contact Center & Customer Experience Management
LinkedIn, Twitter

ABERDEEN

This Knowledge Brief highlights the benefits healthcare organizations achieve by incorporating advanced statistical analysis into their activities.

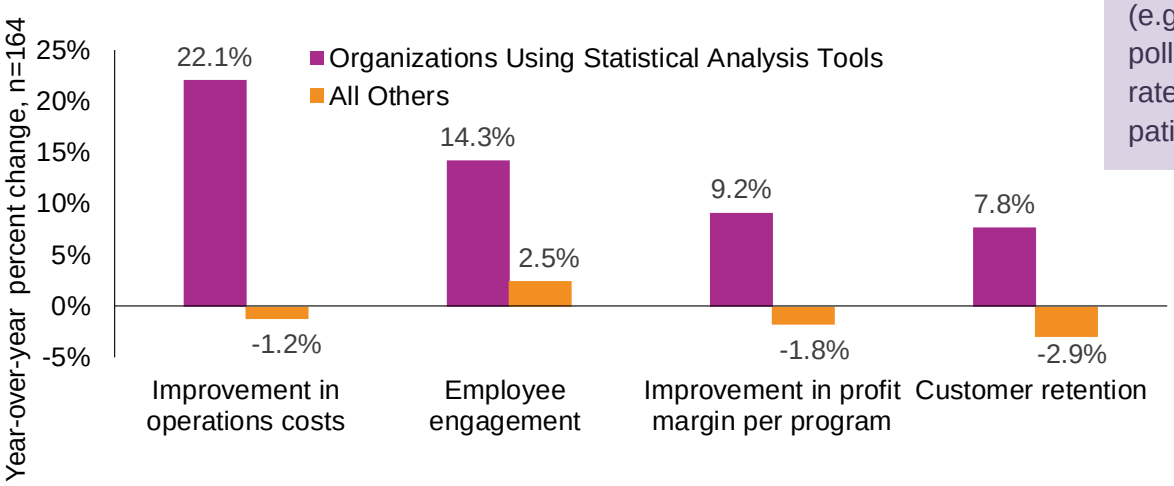
Turning Data into Insight Helps Healthcare Organizations Maximize Results

Healthcare organizations often have an abundance of data that can be leveraged to significantly improve both their operations and patient outcomes. However, Aberdeen's research reveals that while many healthcare providers are rich in data, they are still poor in *insight*. Specifically, the findings reveal that 83% of all companies are not fully satisfied with their ability to use existing data to achieve desired results.

There are many reasons why healthcare organizations could find it challenging to glean insight from their data. The first and foremost reason is a lack of proper technologies that are necessary for analyzing data and turning it into valuable insight. The good news is that Aberdeen's related research shows that when companies use advanced analytics (see sidebar), they are 8.7 times more likely to indicate that they are extremely satisfied with their ability to use data to do their jobs more efficiently.

As illustrated in Figure 1, advanced analytics helps firms achieve significant performance gains through better data analysis.

Figure 1: Healthcare Organizations Using Advanced Analytics Tools Achieve Superior Performance Results



Source: Aberdeen Group, July 2018

Definition: Advanced Statistical Analysis

Aberdeen defines "advanced statistical analysis" – also referred as 'advanced analytics' in this document – as a set of technologies (e.g., business intelligence, predictive analytics, and root-cause analysis) enabling organizations to analyze data to uncover hidden trends, make forecasts, and derive actionable insights.

For healthcare organizations, it allows employees to glean key insights from their data, such as how environmental factors (e.g., water quality and air pollution) affect cancer rates across specific patient demographics.

There are four categories in which organizations using advanced analytics achieve superior results, compared to those that don't. Let's take a closer look at each one and discuss how advanced analytics influence healthcare organizations' performance in each category.

Figure 1 shows that advanced analytics users achieve 22.1% annual improvement (*decrease*) in operations costs, compared to firms without this technology observing 1.2% worsening (*increase*). Advanced analytics allows organizations to uncover hidden insights which helps decrease costs by driving efficiency in patient care. Furthermore, adding new data points to existing data increases the likelihood of generating accurate and actionable insights.

Another reason that drives cost savings enjoyed by organizations using advanced analytics is the ability to generate insights more efficiently. This refers to utilizing capabilities such as time-series analysis, correlation, regression etc., in a more user-centric manner, reducing the complexity in data analysis. Less complexity means healthcare organizations can focus more on effective treatment methods, and hence improve the quality of patient care.

When employees are empowered with tools that make doing their job more efficient, they are more likely to be productive and engaged in their role. In fact, Figure 1 reveals that organizations using advanced analytics enjoy 5.2 times greater annual improvement in employee engagement rates (see sidebar), compared to non-users (14.3% vs. 2.5%). Employees in healthcare firms are engaged when they can do their jobs well, and this means that firms improving employee engagement rates deliver superior patient outcomes. They do so by providing personalized patient services, streamline patient flow, optimize resources, etc.

The quality of patient care and outcomes goes hand in hand with healthcare organizations' ability to manage profitable financial operations that enable employees the tools to address patient needs. To this point, Figure 1 shows that companies using advanced analytics enjoy 9.2% annual improvement in their profit margin per program, compared to 1.8% *worsening* by non-users. This gap is significant. Consider a healthcare organization generating $50 million in profit annually. This gap of 11% in profit margins between users and non-users of advanced analytics translates to $5.5 million greater profit for companies in the former category. Over the course of five years, that same firm would observe $27.5 million in cost savings by improving the profit margins of its research activities.

Customer retention is a key goal for almost all organizations. For healthcare firms, it means delivering quality patient care that earns patients' trust and turns them into advocates who refer the organization to others for their

Companies that are extremely satisfied with their ability to use data are 2.1 times more likely to use statistical analysis tools, compared to those that struggle with using data.

Definition: Employee Engagement

Aberdeen defines "employee engagement" as a state of positive work-related attitude, characterized by high levels of energy, emotional commitment, and satisfaction derived from the work itself. When employees are engaged, they feel a vested interest in the company's success and are both willing and motivated to perform to levels that exceed the stated requirements of their job.

respective health issues. It also means being the provider of choice if and when the same patients will need medical attention. Figure 1 shows that firms using advanced analytics once again have a significant advantage in this area, compared to non-users. Specifically, they achieve 7.8% annual improvement in customer retention rates, compared to 2.9% *worsening* by non-users. The gap between customer retention rates is a validation that healthcare firms using advanced analytics can deliver more personalized patient centric care with higher patient satisfaction rates.

Key Takeaways

Data is vital for healthcare organizations to do research that will help improve the quality and efficiency of their activities, such as finding new treatment options for illnesses. However, companies can turn data into actionable insights only when they have the right tools. To this point, Aberdeen's research shows that only 17% of organizations are satisfied with their ability to use data to achieve their goals. These savvy users of data are 2.1 times more likely (75% vs. 24%) to use advanced analytics.

Findings in this Knowledge Brief reveal that companies using advanced analytics achieve significant annual performance gains — those that edge out non-users of this technology. These include reducing operations costs, growing profit margins, boosting employee engagement, and delivering a seamless patient experience. As a healthcare organization, if your performance is behind that of the advanced analytics users illustrated in Figure 1, then we highly recommend you consider how this technology can transform your organization. This will help uncover potential opportunities to empower them. It will also help assess ways you can make the process of turning data into insight more efficient — and help transform your business by aligning your research activities with those of top performers.

About Aberdeen Group

Since 1988, Aberdeen Group has published research that helps businesses worldwide to improve their performance. Our analysts derive fact-based, vendor-neutral insights from a proprietary analytical framework, which identifies Best-in-Class organizations from primary research conducted with industry practitioners. The resulting research content is used by hundreds of thousands of business professionals to drive smarter decision-making and improve business strategies. Aberdeen Group is headquartered in Waltham, Massachusetts, USA.